

Application No. 10/825,522
Amendment dated June 10, 2008
Reply to Office Action of March 10, 2008

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for Inserting a plurality of spinal fusion implants across a disc space between two adjacent vertebral bodies of a spine, said method comprising:

providing the plurality of implants each comprising opposite threaded arcuate portions adapted for placement toward and at least in part within the adjacent vertebral bodies and having a distance therebetween defining an implant height greater than the normal height of the disc space to be fused, at least a first of said the plurality of implants implant having a leading end, a trailing end, a mid-longitudinal axis therebetween, and at least a medial side along said the mid-longitudinal axis configured for placement in close proximity to a second of said the plurality of implants; ~~said method comprising the steps of:~~

forming two partially overlapping bores a first bore across the disc space by removing arc shaped portions from each of the vertebral bodies adjacent the disc space, the first bore having a mid-longitudinal axis;

forming a second bore across the disc space by removing arc shaped portions from each of the vertebral bodies adjacent the disc space, the second bore having a mid-longitudinal axis, at least a portion of the second bore overlapping the first bore, the mid-longitudinal axes of the first and second bores being convergent to one another;

inserting with at least an element of rotation the said-first implant into one of said overlapping bores the first bore with said the medial side being oriented facing the interior of said the disc space when the first implant is in a final installed position; and

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- Inserting with at least an element of rotation ~~said the~~ second implant having a medial side and an opposite lateral side into ~~a the~~ second ~~bore of said overlapping bores, said lateral the medial side of said the~~ second implant being adjacent to and in close proximity to ~~said the~~ medial side of ~~said the~~ first implant.
2. (currently amended) The method of claim 1, wherein said forming ~~step a first bore and said forming a second bore~~ includes forming ~~bores a bore~~ having a diameter generally corresponding to ~~the a~~ root diameter proximate the leading end of ~~the each of the first and second~~ implants.
 3. (currently amended) The method of claim 1, further comprising ~~the step of pre-tapping the first and second bores prior to the steps of inserting the first and second implants.~~
 4. (currently amended) The method of claim 1, wherein ~~the said~~ inserting steps ~~include the step of the first and second implants includes~~ positioning the first and second implants at an angle toward each other within the first and second overlapping bores such that the combined width of the first and second implants at their leading ends will be less than the combined width of the first and second implants at their trailing ends.
 5. (currently amended) The method of claim 1, wherein ~~the said~~ inserting ~~step the first and second implants~~ includes rotating ~~that implant the first and second implants~~ such that when ~~threaded fully the implant inserted, the first and second implants~~ will come to rest so that the trailing end of each of the first and second implants will be correctly rotationally aligned so that the profile of the trailing end will correspond to the contour of the anterior aspect of the vertebral bodybodies.
 6. (currently amended) A method for inserting a plurality of spinal fusion implants across a disc space between two adjacent vertebral bodies of a spine, ~~at least one said method comprising:~~
 - providing a first of the plurality of implants having the form of a threaded partial cylinder with a leading end, a trailing end, and a mid-longitudinal axis therebetween, the first implant having opposite arcuate portions adapted for

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placement toward and at least in part within the adjacent vertebral bodies, a medial side, and a lateral side, with the medial side having a portion of the external surface being concave extending from one of the opposite arcuate portions to another of the opposite arcuate portions, the portion of the medial side being concave in a direction facing away from the lateral side; and another
providing a second of the plurality of implants having the form of a threaded cylinder with a leading end, a trailing end, and a mid-longitudinal axis therebetween, wherein the largest diameter of the partial cylinder of the first implant and the diameter of the complete cylinder of the second implant are each larger than the disc space between the two adjacent vertebral bodies; said method comprising the steps of:

forming two first and second partially overlapping cylindrical holes across the disc space between the two adjacent vertebral bodies;

threading the partially cylindrical spinal fusion the first implant having a concave portion into one the first of the overlapping cylindrical holes, the concave portion of the medial side of the first implant being oriented such that the concave portion will substantially lie on an arc defined by the radius of the second cylindrical hole adjacent thereto; and

threading the second implant into the second of said the overlapping holes with the second implant in close proximity to the concave portion of the first implant.

7. (currently amended) The method of claim 6, wherein said forming step a first and second partially overlapping cylindrical holes includes forming bore a bore having a diameter generally corresponding to the a root diameter proximate the leading end of each of the first and second implants.
8. (currently amended) The method of claim 6, further comprising the step of pre-tapping the first and second bores prior to the steps of inserting the first and second implants.

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9. (currently amended) The method of claim 6, wherein ~~the inserting steps include the step of said threading the first implant and said threading the second implant~~ includes positioning the first and second implants at an angle toward each other within the overlapping bony holes such that the combined width of the first and second implants at their leading ends will be less than the combined width of the first and second implants at their trailing ends.
10. (currently amended) The method of claim 6, wherein ~~the inserting step said threading the first implant and said threading the second implant~~ includes rotating that implant the first and second implants such that when threaded in fully, the first and second implants will come to rest so that the trailing end of each of the first and second implants will be correctly rotationally aligned so that the profile of the trailing end will correspond to the contour of the anterior aspect of the vertebral bodies.
11. (new) A method for inserting a plurality of spinal fusion implants across a disc space between two adjacent vertebral bodies of a spine, said method comprising:
- providing a first implant having a body in the form of a partial cylinder, the body having a leading end, a trailing end, and a mid-longitudinal axis therebetween, the body having a root diameter defined by opposite arcuate portions adapted for placement toward and at least in part within the adjacent vertebral bodies, a lateral side and a medial side opposite the lateral side connecting the opposite arcuate portions, each of the opposite arcuate portions, medial side, and lateral side having a portion of a thread extending therefrom, the medial side being concave in a direction facing away from the lateral side;
 - providing a second implant having a body in the form of a cylinder, the body having a leading end, a trailing end, and a mid-longitudinal axis therebetween, the body having a root diameter defined by opposite arcuate portions adapted for placement toward and at least in part within the adjacent vertebral bodies, a lateral side and a medial side opposite the lateral side connecting the opposite arcuate

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portions, each of the opposite arcuate portions, medial side, and lateral side having a portion of a thread extending therefrom;

forming first and second partially overlapping cylindrical holes across the disc space between the two adjacent vertebral bodies;

threading the first implant into the first of the overlapping cylindrical holes, the concave portion of the medial side of the first implant being substantially on an arc defined by a radius of the second cylindrical hole adjacent the first hole when the first implant is in a final installed position; and

threading the second implant into the second of the overlapping holes, at least a portion of the root diameter of the second implant being received within the root diameter of the first implant.

12. (new) The method of claim 11, wherein said forming the first and second partially overlapping cylindrical holes includes forming a bore having a diameter generally corresponding to the root diameter proximate the leading end of each of the first and second implants.
13. (new) The method of claim 11, further comprising pre-tapping the first and second partially overlapping cylindrical holes prior to inserting the first and second implants.
14. (new) The method of claim 11, wherein said threading the first implant and said threading the second implant includes positioning the first and second implants at an angle toward each other within the first and second bores such that the combined width of the first and second implants at their leading ends will be less than the combined width of the first and second implants at their trailing ends.
15. (new) The method of claim 11, wherein said threading the first implant and said threading the second implant includes rotating the first and second implants such that when fully inserted, the first and second implants will come to rest so that the trailing end of each of the first and second implants will be correctly rotationally aligned so that the profile of the trailing end will correspond to the contour of the anterior aspect of the vertebral bodies.